

PATENT COOPERATION TREATY

TRANSLATION

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing
(day/month/year)

Applicant's or agent's file reference
AK-PCT-1001

FOR FURTHER ACTION

See paragraph 2 below

International application No.
PCT/JP2005/002915

International filing date (day/month/year)
23.02.2005

Priority date (day/month/year)
03.03.2004

International Patent Classification (IPC) or both national classification and IPC

Applicant
AKIYAMA, Izumi

1. This opinion contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|--|
| <input checked="" type="checkbox"/> | Box No. I | Basis of the opinion |
| <input type="checkbox"/> | Box No. II | Priority |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> | Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> | Box No. VI | Certain documents cited |
| <input checked="" type="checkbox"/> | Box No. VII | Certain defects in the international application |
| <input checked="" type="checkbox"/> | Box No. VIII | Certain observations on the international application |

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/JP

Authorized officer

Facsimile No.

Telephone No.

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Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

☐ a sequence listing

☐ table(s) related to the sequence listing

b. format of material

☐ in written format

☐ in computer readable form

c. time of filing/furnishing

☐ contained in the international application as filed.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

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Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	2-14	YES
	Claims	1	NO
Inventive step (IS)	Claims	8	YES
	Claims	1-7, 9-14	NO
Industrial applicability (IA)	Claims	1-14	YES
	Claims		NO
2. Citations and explanations:			
<p>Document 1: JP, 10-181879, A (Koganei Corp.), 07 July, 1998 (07.07.98)</p> <p>Document 2: JP, 62-16945, A (Seibu Giken Co., Ltd.), 26 January, 1987 (26.01.87)</p> <p>Document 3: JP, 11-61597, A (Awa spindle Corp.), 05 March, 1999 (05.03.99)</p> <p>Document 4: JP, 62-269826, A (Matsushita Electronics Corp., later absorbed by Matsushita Electric Industrial Co., Ltd.), 24 November, 1987 (24.11.87)</p> <p>Document 5: JP, 8-203984, A (Oki Electric Industry Co., Ltd.), 09 August, 1996 (09.08.96)</p> <p>Document 6: JP, 59-155141, A (Toshiba Corp.), 04 September, 1984 (04.09.84)</p> <p>Document 7: JP, 2002-64130, A (Harmotec Corp.), 28 February, 2002 (28.02.02)</p> <p>Document 8: JP, 8-330385, A (Kokusai Electric Co., Ltd., later merged into Hitachi Kokusai Electric Inc.), 13 December, 1996 (13.12.96)</p> <p>Document 9: JP, 8-316288, A (Nikon Corp.), 29 November, 1996 (29.11.96)</p>			
<p>The subject matter of claim 1 does not appear to be novel or to involve an inventive step since these matters are described in document 1 cited in the ISR.</p>			
<p>The subject matter of claim 2 does not appear to involve an inventive step in view of documents 1 and 2 cited in the ISR.</p>			
<p>A person skilled in the art could have easily conceived of adding the groove 9 of the Bernoulli chuck described in document 2 to the gas guiding surface 6 of the Bernoulli chuck described in document 1.</p>			
<p>The subject matter of claim 3 does not appear to involve an inventive step in view of documents 1, 2 and 3 cited in the ISR.</p>			
<p>It is a well-known technical matter to provide a current plate in a tube path for flowing gas (please see document 3). A person skilled in the art could have easily conceived of providing a current plate in the gas flow path 9 of document 1.</p>			
<p>The subject matter of claim 4 does not appear to involve an inventive step in view of documents 1, 2, 3 and 4 cited in the ISR.</p>			
<p>A person skilled in the art could have easily conceived of providing the chambers 4 and 15 used for the Bernoulli chuck described in document 4 in the middle of the gas flowing path 9 of document 1.</p>			
<p>The subject matter of claim 5 does not appear to involve an inventive step in view of documents 1, 2, 3, 4 cited in the ISR.</p>			
<p>Document 4 describes a constitution in which the nozzle for piping 1 is connected from the side of the Bernoulli chuck.</p>			

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In addition, how many branches the gas supplying path and the gas supplying opening are divided into is considered to be a matter a person skilled in the art can select as required.

The subject matter of claim 6 does not appear to involve an inventive step in view of documents 1, 2, 3 and 4 cited in the ISR.

It is not considered especially difficult to section the slit 11 described in document 1 into a plurality of slits in the circumferential direction.

Furthermore, the groove 9 of document 2 is extended from the central part of the flat surface 4 to the outer circumference.

The subject matter of claim 7 does not appear to involve an inventive step in view of documents 1, 2, 3 and 4 cited in the ISR.

A person skilled in the art can easily select whether a concavity is to be provided in relation to the surface or a convexity is to be provided in relation to the surface when concavity or convexity should be provided. Therefore, it is not considered especially difficult to provide convexity instead of the groove 9 described in document 2.

The subject matter of claim 9 does not appear to involve an inventive step in view of documents 1, 2, 3, 4 and 5 cited in the ISR.

Document 5 describes quartz as a material used for the absorption part of the Bernoulli chuck. It is not considered especially difficult to construct the transportation head 1 described in document 1 from quartz glass.

The subject matter of claim 10 does not appear to involve an inventive step in view of documents 1, 2, 3, 4 and 5 cited in the ISR.

Document 1 describes a plate work such as a semiconductor wafer, a glass substrate, a floppy disc and a nonwoven fabric as a transported material.

The subject matter of claim 11 does not appear to involve an inventive step in view of documents 1, 2, 3, 4, 5 and 6 cited in the ISR.

Document 6 describes a constitution in which the holding case 12 and the heater 13 are provided in the part for supplying gas to the Bernoulli chuck. A person skilled in the art could have easily conceived of adding these to the Bernoulli chuck described in document 1.

It is a well-known and commonly-practiced technique to control the temperature by means of a temperature controlling means for obtaining a desired temperature.

The subject matter of claim 12 does not appear to involve an inventive step in view of documents 1, 2, 3, 4, 5, 6 and 7 cited in the ISR.

Document 7 describes a Bernoulli chuck comprising a gripping part 57 and guide arms 591 and 592. It is not considered especially difficult to use the Bernoulli chuck described in document 1 instead of the rotational flow creating body 52 to obtain an absorption device.

The subject matter of claim 13 does not appear to involve an inventive step in view of documents 1, 2, 3, 4, 5, 6, 7 and 8 cited in the ISR.

It is a well-known matter to removably provide a movable body with the rear anchor part of the absorption member comprising an absorption part (please see document 8).

The subject matter of claim 14 does not appear to involve an inventive step in view of documents 1, 2, 3, 4, 5, 6, 7, 8 and 9 cited in the ISR.

Document 9 describes a constitution in which the main body 10a of the robot can proceed straight along the Y axis, whereas the fork can proceed straight along the X and Z axes, and in which

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a plurality of adsorption pads 13 are provided on the fork. It is not considered especially difficult to use the Bernoulli chuck described in document 1 instead of the adsorption pads to obtain an absorption transportation device.

The subject matter of claim 8 is neither described in any of the documents cited in the ISR nor obvious to a person skilled in the art.

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Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

The description "said" of "said radial ventilation guide" in claim 6 is improper because claim 6 also cites claim 1, which does not include "a radial ventilation guide".

The descriptions "said" of "said radial ventilation guide and said axial direction ventilation guide" in claim 7 are improper because claim 7 virtually cites claim 1 or claim 2 selectively, each of which does not include either "a radial ventilation guide" or "an axial direction ventilation guide".

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Box No. VIII **Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

It is not clear which direction the "axial direction" in claim 3 means.